

## 8.2.1. General and uniformly general exemplification

When first discussing quantifier phrases in [7.1.1](#), we considered the ambiguity of sentences like

*A reporter interviewed each juror.*

Quantifiers were designed to represent the alternative interpretations of sentences like this, and we are now in a position to see how they provide an account of the ambiguity in this example.

Since this sentence contains two quantifier phrases, we have two places to begin its analysis; and two different logical forms can result.

*A reporter interviewed each juror*  
*A reporter is such that (he or she interviewed each juror)*  
 $(\exists x: x \text{ is a reporter}) x \text{ interviewed each juror}$   
 $(\exists x: x \text{ is a reporter}) (\forall y: y \text{ is a juror}) x \text{ interviewed } y$

$$(\exists x: Rx) (\forall y: Jy) Ixy$$

$$\exists x (Rx \wedge \forall y (Jy \rightarrow Ixy))$$

*A reporter interviewed each juror*  
*Each juror is such that (a reporter interviewed him or her)*  
 $(\forall y: y \text{ is a juror}) a \text{ reporter interviewed } y$   
 $(\forall y: y \text{ is a juror}) (\exists x: x \text{ is a reporter}) x \text{ interviewed } y$

$$(\forall y: Jy) (\exists x: Rx) Ixy$$

$$\forall y (Jy \rightarrow \exists x (Rx \wedge Ixy))$$

[I:  $\lambda xy (x \text{ interviewed } y)$ ; J:  $\lambda x (x \text{ is a juror})$ ; R:  $\lambda x (x \text{ is a reporter})$ ]

Symbolically, the only difference in the analyses that use restricted quantifiers lies in the order of those quantifiers. The difference this makes can be seen best by looking at the second step in each analysis:

*A reporter is such that he or she interviewed each juror*  
*Each juror is such that a reporter interviewed him or her.*

If we use terms that reflect the medieval theories of reference discussed in [7.1.1](#), we can say that the difference is due to the fixed indefinite reference of *a reporter* in the first and its variably indefinite reference in the second. Since the latter sentence says only that each juror was interviewed without claiming that any one reporter conducted all the interviews, it is entailed by the first but does not entail it. Thus the first

of the claims is the stronger of the two.

An analysis of logical form using quantifiers is capable of much more than the simple dichotomy between fixed and variably indefinite reference, but a distinction between the sorts of claims represented by the sentences above will be useful in organizing the richer range of possibilities we now have available. In the terms we have been using recently, each of the two is both a generalization and a claim of exemplification. In each case, one of the two aspects is recognized as the overall form of the sentence while the other remains part of the quantified predicate. The first of these two sorts of claims, represented by the first interpretation of the original sentence, says that the property of interviewing each juror is exemplified. This is a general property, one whose predication is expressed by a generalization, so the first sort of claim says that a general property is exemplified. The second makes a generalization, but each instance of this generalization is a claim of exemplification that asserts that a particular juror was interviewed. We will describe this second sort of statement as a claim of **general exemplification**: it says that a relative property is exemplified generally with respect to some domain. In this case, the property of being an interviewing reporter is exemplified generally with respect to jurors; that is, an example of such a reporter can be found for each juror.

This way of looking at the two claims puts them in a parallel position, but we know that they do not stand on the same level as far as their content goes. The first implies the second but is not implied by it. In other words, the first adds information to the second: it says that the second is true in a special way. Let us capture this idea by saying that, while the second is a claim of general exemplification, the first is a claim of **uniformly general exemplification**. In the example above, the second claim says that an example of an interviewing reporter is available generally for jurors, and the first claims that this sort of example is not only available generally but can be chosen in a uniform way, the same reporter can serve as an example no matter what juror we consider. In symbolic terms, we have a claim of general exemplification whenever a universal and existential have overlapping scope. If their scopes overlap the scope of one includes the other, and we have a claim of uniformly general exemplification when it is the existential that includes the universal.